

HONOLULU, HAWAII TERRITORY, SUNDAY, DECEMBER 12, 1909.

## THE FUNCTION OF FORESTRY IN HAWAII

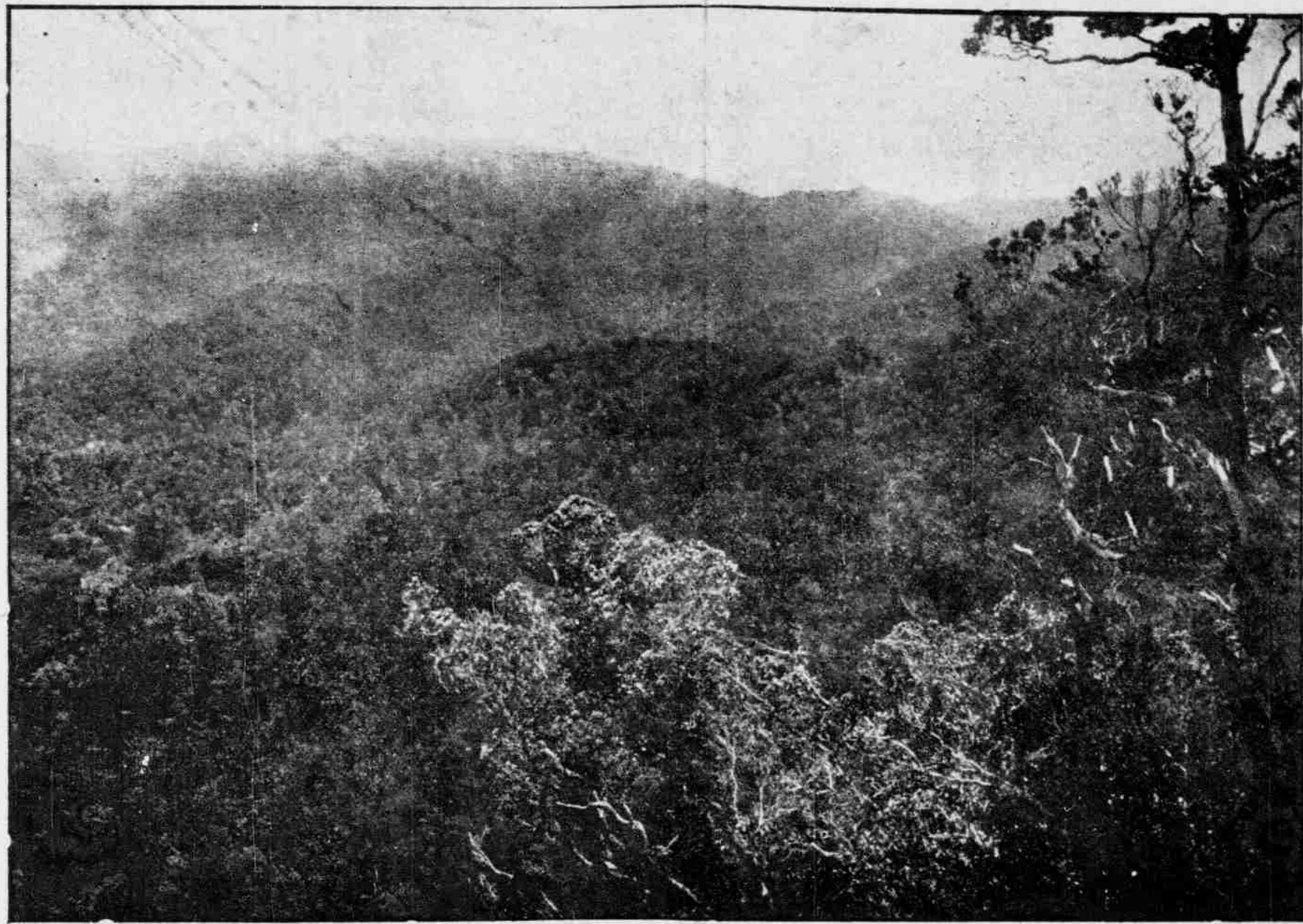
BY RALPH S. HOSMER, SUPERINTENDENT OF FORESTRY OF THE TERRITORY OF HAWAII.

Wood and water are fundamental needs in every community. Both are products of the forest—wood, directly from the trees themselves; water, indirectly, through the influence that the forest exerts as a protective cover in equalizing and maintaining the flow in the streams. In Hawaii the province of forestry is to care for the existing native forests that now cover the watersheds, and to encourage wood production through the planting of trees.

The importance both of the native and of the planted forest is generally recognized in Hawaii, and has led to a strong public sentiment in favor of forestry. This finds expression in a territorial forest service, the division of forestry of the board of agriculture and forestry, an office carried on by technically-trained men, who are charged with the creation and administration of forest reserves and with the prosecution of other forest work. Hawaii is one of the eleven States in the Union to employ a professional forester.

### Staff Employed.

The work of the division of forestry is carried on under the general supervision of the territorial board of agriculture and forestry, of which the Hon. Marston Campbell is president and executive officer. As now organized, the staff of the division of forestry consists of the superintendent of forestry, Ralph S. Hosmer; the forest nurseryman, David Haugis; a botanical assistant, Joseph F. Rock, and a



A COMPLETELY FORESTED WATERSHED.

—Photo by R. K. Bonine.

board of agriculture and forestry, declares by proclamation that within certain specified boundaries the land should be permanently maintained under a forest cover. This declaration constitutes the area a forest reserve. By naming them in the proclamation, the Governor sets apart such unleased government lands as may be within the reserve boundaries, and from time to time, as the leases on other government lands in the reserve expire, they, too, are added to the area actually set apart. In most of the reserves there is also privately owned land, but that this may be treated as an organic part of the reserve, the law provides that its management and control may be turned over to the board of agriculture and forestry. The law creating the present board of commissioners of agriculture and forestry and providing for the establishment of forest reserves is Chapter 28 of the Revised Laws of Hawaii.

What has so far been done is practically to provide a skeleton of forest reserve administration. The defining of boundaries, the reports and recommendations, the official proclamation of the area as a reserve are all necessary steps essential to the creation of a legal forest reserve. As such they justify the time that has to be spent on them. But no one understands more clearly than do the members of the division of forestry that it takes more than reports and the coloring in of areas on a map to make an efficient forest reserve.

To make the forest reserve system of Hawaii truly effective requires men as well as maps. Specifically three things are needed: forest rangers, fences for certain portions of forest reserve boundaries, and a fund for fighting forest fires on government land. Gradually, as money becomes available, these wants will be supplied. In the mean time the underlying framework is being perfected.

When the collections are made next May of the special income tax, levied to provide the immigration-conservation fund, it is expected that a number of lines of forest work can be taken up

administration of forest reserves, and forest planting.

### The Forest Reserves.

In this Territory the forest is a prime factor in the maintenance of economic prosperity. Essentially a country dependent on agriculture, success in Hawaii may justly be said to rest on the right use of water. Because of its geographic position and the conditions of climate, topography and soil that characterize the Islands, an assured water supply is a vital necessity. To insure a sufficient supply of water for irrigation, for power development and other economic uses, and even for domestic supply, requires that the forest on all the important watersheds and catchment basins be protected and permanently maintained. A dependable supply can only be obtained with the aid of the forest.

Forest reserves are created in Hawaii that the existing forests may be better protected and more systematically administered. The chief object of the Hawaiian forest reserves is to assist in making water available for human use. The creation of forest reserves is therefore the direct outcome of an economic necessity. The forest reserves are not made because they contain rare or beautiful trees, nor because they happen to include some wonderful scenery, but purely and simply because it is sound business policy to protect the sources of the water that is needed for irrigation, power development, the fluming of cane and domestic supply.

In other words, the areas that are set apart as forest reserves are of greater value because they help to conserve water than they would be if used for any other purpose. There is no mystery about the matter. It is merely good common sense so to use the rough and inaccessible areas that constitute the watersheds of the streams in most of the windward districts, that they shall safeguard the supply of water needed for the development of better-lying lands. Recognition of this fact emphasizes the more forcibly the necessity for forest protection and the advisability of forest work, for water is needed not only for the land now under cultivation, but also for the reclamation of other areas on each island of the group that with irrigation can be made productive.

### How Forest Reserves Are Created.

In Hawaii forest reserves are created by the Governor of the Territory, who, acting on the recommendations of the



NEAR THE HEAD OF THE WAHIAWA DITCH.

—Photo by R. K. Bonine.



FOREST ON TANTALUS. PLANTED EUCALYPTUS CITRIODORA.

—Photo by R. K. Bonine.

forest inspector, Louis Margolin. The last named is an officer of the United States forest service, temporarily transferred to Hawaii for a special investigation of the planted eucalyptus forests of this Territory, in which study the division of forestry is cooperating with the federal government.

At the government nursery, at the experimental garden in Makiki Valley and at subgardens on the other islands, a number of laborers are employed in caring for trees, new to the Territory, that are being tested, and for growing for general distribution kinds that have been proved to be desirable.

### How the Work Is Carried On.

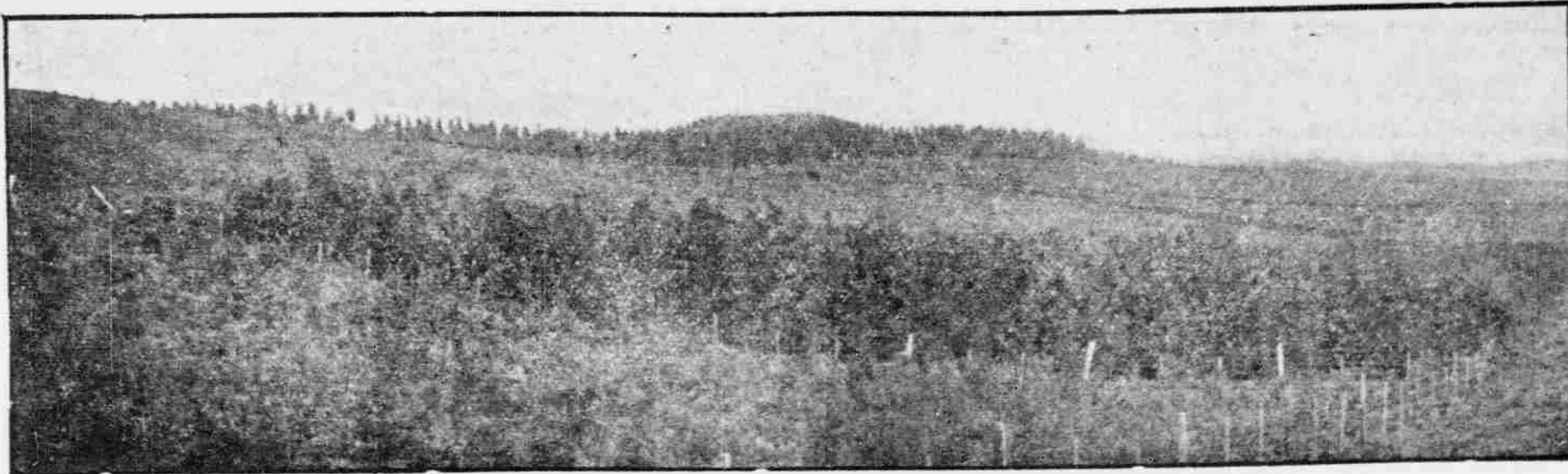
As the forest needs of Hawaii are two-fold, so the work of the territorial division of forestry falls naturally into two main branches—the creation and

and pushed actively to completion.

During the past five years under a definite forest policy systematically followed, twenty forest reserves have been set apart, with an aggregate total area of 545,764 acres. Of this area 357,180 acres, or 65 per cent, is land belonging to the territorial government. The other 35 per cent is in private ownership. But for the most part the owners of the lands, fully aware of the benefits of forest protection, cooperate actively with the territorial government in the management of the forest. It is estimated that eventually about three-quarters of a million acres will be included within forest reserve boundaries, of which about 70 per cent will be government land.

### Forest Planting in Hawaii.

The second main line of forest work in Hawaii is tree planting. The fact that none of the native trees in Hawaii furnish construction timber has led to extensive tree planting, both by the



YOUNG FOREST ON MAUI—HAIKU HILL IN BACKGROUND.

—Photo by R. K. Bonine.

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